

1 (Cancelled)

2 (Cancelled)

3. (Cancelled)

4. (Cancelled)

5 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]

45, in which said optical element comprises a transmitting element.

6 (Currently Amended) The ~~optical arrangement~~ system according to claim 5, in which said transmitting element comprises a lens.

7 (Cancelled)

8 (Cancelled)

9 (Cancelled)

10 (Cancelled)

11 (Cancelled)

12 (Cancelled)

13 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]

45, in which said optical element comprises a mirror.

14 (Cancelled)

15 (Cancelled)

16 (Cancelled)

17 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]

45, having a slit-shaped image field.

18 (Cancelled)

19 (Cancelled)

20 (Cancelled)

21 (Currently Amended) The ~~optical arrangement~~ system according to claim [[5]]
45, in which said optical element is arranged near a field plane.

22 (Cancelled)

23 (Cancelled)

24 (Cancelled)

25 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]
45, further comprising a reticle, the illumination of which lacks rotational
symmetry.

26 (Currently Amended) The ~~optical arrangement~~ system according to claim 25, in
which said reticle illumination consists of off-axis, dipole or quadrupole
illumination.

27 (Cancelled)

28 (Cancelled)

29 (Cancelled)

30 (Cancelled)

31 (Currently Amended) The ~~projection exposure~~ system according to claim [[29]]
45, in which said optical element is arranged near a pupil plane.

32 (Cancelled)

33 (Cancelled)

34 (Cancelled)

35 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]
45, in which said passive heat conducting devices comprise connecting structure
that comprises portions of different materials.

36 (Cancelled)

37 (Cancelled)

38. (Cancelled)

39 (Currently Amended) The ~~optical arrangement~~ system according to claim [[1]]
45, in which said passive heat conducting devices comprise connecting structure
that comprises adjustable portions.

40 (Currently Amended) The ~~optical arrangement~~ system according to claim [[2]]
45, in which said passive heat conducting devices comprise a thermally
conducting element that is adjustable.

41 (Currently Amended) The projection exposure system according to claim [[3]]
40, in which said thermally conducting elements comprise adjustable portions.

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (New) A microlithography projection exposure system having a light source and
an optical element which is heated by radiation from the light source in a non-
rotationally symmetric fashion, and having non-rotationally symmetric cooling of
the optical element, the cooling being effected by passive heat-conducting
devices, characterized in that the passive heat-conducting devices comprise webs
of different cross section, or fingers of different width, shape or thickness, or of

different material, such that an at least partial homogenization of the temperature distribution in the optical element is effected.

46. (New) The microlithography projection exposure system according to claim 45, in which the optical element is fastened in a mount and radiation is applied to the optical element in such a way that heat is fed in a fashion exhibiting no symmetry corresponding to the shape of the optical element, and the said passive heat conducting device is provided between the optical element and the mount as a connecting structure which exhibits a symmetry not corresponding to the shape of the optical element in such a way that the at least partial homogenization of the temperature distribution in the optical element is effected.
47. (New) The microlithography projection exposure system according to claim 45, in which the optical element is fastened in a mount and radiation is applied to the optical element in such a way that heat is fed in a fashion exhibiting no symmetry corresponding to the shape of the optical element and the said passive heat conducting device is designed as a unipartite or multipartite heat conducting element and is arranged to be operationally connected to the optical element and the mount such that a form of heat transport results which effects an at least partial compensation of the asymmetry of the temperature distribution in the optical element.
48. (New) The microlithography projection exposure system according to claim 45, further characterized in that at least one part is in thermal contact with the optical element, covers a part of the cross section of the optical element not touched by the radiation, and reduces temperature gradients in the optical element.

49. (New) The projection exposure system according to claim 46, further characterized in that the connecting structure is constructed from parts which consist of different materials.
50. (New) The projection exposure system according to claim 47, further characterized in that the heat conducting element is assembled from parts made from different material.
51. (New) The projection exposure system according to claim 48, further characterized in that the part or parts in thermal contact consist of a number of different materials.
52. (New) The projection exposure system according to claim 46, further characterized in that the connecting structure has adjustable parts.
53. (New) The projection exposure system according to claim 47, further characterized in that the heat conducting element is adjustable.
54. (New) The projection exposure system according to claim 48, further characterized in that the part or parts in thermal contact are at least partially adjustable.